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Adm. Richardson: Thank you everybody, and thank you for the pleasure of being here at the conference. I thought maybe what I'd do is open with just a few things to set the stage, and then I want to get to your questions as quickly as possible because that's really where all the action is anyway.

First, Mr. [Macalese], thanks very much for having me. It's a great group, high energy, full contact, and so as I said, I look forward to that part of the dialogue.

I did want to spend some time just sort of describing what is motivating our way forward in the Navy. We articulated it in this document, The Design for Maintaining Maritime Superiority, and we really describe how we are going to approach what is a contest for maritime superiority. And the key word there is it's a contest. That's probably true for the first time in about 25 years that we are being contested on the high seas for superiority.

And often times when you think about the contest it's very easy to talk about the contestants and that's certainly a very relevant part of any contest, but I wanted to also take some time and think about the rules that govern the contest as well. My argument to that is, the character of the game has changed significantly since let's just say the early '90s, and if we are not responsive to that changing character then no matter how good our roster is, you know, we've got the best defensive roster in the NFL, but if we are not trained and positioned to defend against a no-huddle offense, the pace of that offense, then we're just going to be caught with too many men on the field. We'll be penalized. We will not be set when the ball is snapped, and we'll just fall further and further behind. So it's more than just about the contestants. It's about the character of the game.

I sort of define this character in terms of three forces. One is the forces that are acting on the maritime domain, and so much about this domain has not changed since man first put to sea thousands of years ago. If you think about kill points and shipping lanes. You know, if you look at one map it all looks blue, it all looks very uniform. But if you look at the utilization of that domain, shipping traffic for instance, this

structure emerges very quickly, and these choke points, the straits. Those things that define those shipping lanes, those nodes which can be used, they present vulnerabilities and opportunities. Those also emerge very quickly. So that has not changed very much at all, the physical part. But even with that, a tremendous amount has changed.

Since 1992 shipping traffic has increased by a factor of four, which has really outstripped the pace at which the global GDP has increased which is about, it's increased by about 80 percent over the same period of time. So this global economy being driven by maritime trade increasing very very quickly in the past 25 years.

We remain a maritime nation. Ninety percent of our trade still travels over the sea. So our participation in that increasingly active, increasingly stressed, and increasingly contested global domain is going to be absolutely critical going forward. Just to keep up with the shipping that is fueling our economy.

And it's not just the shipping. There's the recession of the polar ice cap and that is giving access to continental shelves and the resources available there that just wasn't accessible before. Technology is making parts of the ocean floor accessible and the resources on the ocean floor accessible that simply we couldn't reach before. So there is, in addition to the traffic on the sea there is this access to resources and economies on the sea floor as well, which gives rise to an infrastructure, right? The projections for natural gas and oil fluctuating up frequently, but in general sort of a 50 or more percent increase over the next 20 years in terms of getting at those natural resources on the ocean floor.

Then another part of that infrastructure is cabling. So if you log onto your computer and you send an email to a partner overseas, 99 percent of that internet traffic flows on undersea cables, and those also give rise to a structure.

So when you log onto your computer it looks like that whole system is available to you in a very flat way, but the fact of the matter is that there are nodes in that domain as well, in the information domain.

Which gives a segue to the second force that I see is changing the way that we all do business including the maritime domain which is this information system. Just as global as the system of seas, increasingly used and super-fast, right? Increasing

not only the breadth and the reach but also the speed. Things happening faster and faster. I know in this crowd I'm preaching to the converted in that regard so I don't need to spend a whole lot of time about that.

The third factor, the force at work, is this, and they're all interrelated, is this rate of introduction of technology. It certainly includes information technologies, but not limited to information technologies. Information technologies are giving rise to advances in genetic science, advances in [data to] manufacturing, advances in artificial intelligence which I think are all going to be fundamental game-changers very quickly in our near future.

And not only is that technology being introduced at a faster and faster rate, but it is being adopted by society at a faster and faster rate as well. So while it took several decades for let's say 25 percent of Americans to get a telephone when it was first invented by Alexander Graham Bell, it took something on the order of under five years for everybody to get a smart phone when those were introduced.

So not only is technology coming at us faster and faster, but it is also being adopted and incorporated into our business faster and faster.

So higher complexity, higher pace, higher utilization, more stress, and increasingly contested. Those three global systems -- the oceans, the information system and this push for technology. Which should not be too much of a surprise for an increasingly globalized world that these global systems should come under increased stress.

The fourth force is the resources that we have to confront this increasingly complex situation, and those are lying flat at best for us right now. That is our projection, is we're going to see flat or maybe just a little bit less than flat resources to address this.

Now we've spent some time talking about the rules of the contest, the character of the game, but we can't go on and completely ignore the contestants, and those have changed a great deal as well. I sort of see those groups into I would say three groups. One is this group of global powers. So the United States, China and Russia, world power competition has also returned for maybe the first time in 25 years. So that's one group.

I would say in another group are threats like competitors, contestants, like North Korea and Iran. Not too long ago we could sort of put those, you could contrast those. Hey, there's world powers, there's great power competition, and then there's regional powers, but nothing is truly regional anymore. By virtue of those forces that we described, everything is at least trans-regional if not global, and that changes the way in which we must confront our contestants.

The third group is just this persistent and adaptive counterterrorism fight which is something that has been with us for a long time and will be with us, I believe, for a long time going forward.

There's a lot of discussion as we talk through our budget submission about how many ships do you need? And the number on the street right now is 308 ships, and that was derived from a force structure assessment that we did in 2012, and it was updated in 2014, and when we did that, just to give you a sense of how quickly things change, we did not have really Russia in the calculus at that time. So now Russia is in the global power competition. A brand new addition to the spectrum of contestants. And we also didn't really have to confront in 2014 the demands that ISIL and this global counterterrorism challenge that confronts us as well.

So we're going to do it again, right? For all of the reasons that I described, both the character of the competition as well as the contestants. We're reworking those numbers. We're going to go back, start with the strategic environment, start with those national objectives that we have and re-derive what our fleet should look like. We're cooking on that right now. I would be a paycheck that it's going to be a number greater than 308 ships, just by virtue of the additive nature of the complexity and the contestants that are confronting us right now.

So that's my sweeping overview. With that as a backdrop I think we'll just go as quickly as we can to questions and I'll try and make the rest of my points in the context of the Q&A. So thank you very much.

Moderator: As the audience gets warmed up, you had mentioned the betting of the paycheck. Is it my sense that you're looking at expanding particularly the undersea and maybe perhaps the Virginia Class?

Adm. Richardson: We are already doing that, right? So we've continued to, the budget submission includes continuing with Virginia at two per year with the exception of 2021 because that's the introduction of the Ohio Replacement Program. We're actually, we spent a year of solid analysis with the industrial base, and by virtue of that good work, really looking at the art of the possible, we think that there's a good chance that we could also put back in a second Virginia in 2021. So looking at exploring the possibility of 10 ships across the FYDP, two per year, maintaining, and getting Ohio Replacement done.

As well, we are funding the Virginia payload module and we're going to be doing that with the second ship in '19, right? So not only kind of continuing to build Virginia Class at a solid steady rate, but also expanding the capability. And when you put that type of an ocean open interface in the submarine like that, and if you just do the TLAM math, you know, you've got almost, well certainly more than a three-fold increase in terms of the number of Tomahawks or strike capability that you've got there. But that's just the beginning, right? In terms of what you can do with that volume.

So yeah, there's a solid investment in undersea technologies. A solid investment in unmanned across the board, but including undersea and so we look at really accelerating forward in that area pretty aggressively.

Audience: Admiral, Sidney Friedberg, Breaking Defense.

To focus on another aspect of the shipbuilding plan, perhaps the biggest delta you've had to deal with recently is the cut in Littoral Combat Ships. So you now need to refigure how you get your small surface combatant objectives and your overall SSC plus large [inaudible] objectives going forward. I understand Secretary Work says well no, you still get to the same 140 number just with a different mix under it.

Adm. Richardson: Yeah.

Audience: But what is the, presumably the time to get there changes, the mix changes. So how are you going to get the surface ship post LCS cut?

Adm. Richardson: I would say that what I would encourage you to think about is, you know, certainly there's the 40 versus 52. 52 currently still the requirement of the force structure

assessment. But it really kind of, I would go back to the submarine example as what we're seeing when you don't pay attention to the entire differential equation, if you will, that involves shipbuilding. Right?

Ships are going to come out of service at the end of their life at pretty much the same rate that they came into service, right? And so if you don't start thinking into the future with respect to shipbuilding, whether it's submarines or whether it's surface ships, large surface combatants or small surface combatants. Yeah, you might peak at a particular level, but you've got to think further downstream as to what the back end of some of these programs are. So that's, I think, work going forward, to make sure that we've got the ability to not only achieve our force structure that we think best meets the requirements for national defense, but also maintains that through. So that steady commitment to shipbuilding that we need to have.

Audience: Admiral, a question back on the undersea for a second. So relative to undersea, are you satisfied currently that we're on a track budget wise to support the obligations we've got on CASD to our UK partners, for example?

Adm. Richardson: We're working very closely. So this is, there's a lot of dimensions to us delivering the Ohio Replacement Program on time, right? So I kind of talk about it in terms of four stallions pulling the same chariot and all four of those stallions have to be running at breakneck to make this thing on time.

One of those is we've got the propulsion plant, right? So there are some requirements to progress that. We're moving to an electric drive propulsion plant so that we can meet the stealth requirements and keep that platform relevant going forward. So there's that part.

There's the ship part. PEO subs and that part, just building the hull and the rest of the ship to make sure that that meets requirements at the most cost-effective. We have set cost objectives that we're treating just like any other performance objectives, cost and schedule. And so being very, you know, serious about that.

The third would be the strategic missile system. So that's all got to come together. We're kind of extending the D5 so that we can kind of smooth out the peak, if you will, and address that

later on. But there's still some integration work that needs to happen.

Then finally there is this partnership with the United Kingdom, and all four of those have to be moving together, and particularly that last one, of course, involve a partner. So we're completely in full contact with our partner, giving them everything that we can. Right now we're on track. But I will tell you, there's really not a moment to lose.

All four of those horses have to be running at full speed to do all of those things and arrive at the point where we can deliver that ship on the cost point that we've set for ourselves. Some of those elements are, you've got to have the design done, you've got to have all of that work done before you start building. It would be my goal to at least set the conditions so that we could approach a block buy of the entire class, right? There's been a lot of research done that you can save on the order of 10 percent. You've got a ship for free, maybe even a little more, if you can commit to that, right? So much confidence and stability [rides] on the industrial side. Then you can allocate risk, you can make investments, and it just, you can smooth out work flow, capital investment. All of that can happen.

But we've got some responsibilities on our side to make sure that that's a serious possibility.

One is the strategic environment. I don't think that there's going to be a change in our strategic environment, so that that class of ship, the undersea leg of the deterrent triad will still be a vital and viable need for the nation going forward. So we can invest with confidence that the requirement will not change.

Then we've got to come down, we've got to make sure the technical risk, the technological risk is suitably low so that we've got that risk point in the right place.

Then finally there's the industrial base. We think that's set by virtue of the work we've done this last year.

So when we are ready to think about how we want to acquire this program, at least the conditions will be met to have the stability and confidence that we can seriously address doing this in a block buy.

Audience: Good afternoon, sir. Rich Serrell, Harris Corporation. First of all, thank you for your service. I want to make sure that I tell you that.

Second what I'd like to do is talk a little bit or have you talk a little bit about the importance of owning the air waves on the sea, electronic warfare. And in the context of the third offset, because we haven't talked much about that today, what this might mean moving forward.

Adm. Richardson: Just to give you a sense of where my mind is.

Did you have another part? I'm sorry.

Audience: And whether or not you think we are putting enough money into that area. Thank you.

Adm. Richardson: This design that we wrote, and I was just the one who was privileged enough to sign it out, but this was a very inclusive effort going forward. So the entire Navy leadership, civilian and military, has bought into this. We kind of got it all down to eight pages, and there are some really big pictures in here too. So you can imagine the prioritization that has to happen to get your whole plan down to eight pages.

And we also worked really hard to put it out in English, right? I'll give you a coin if you can find an acronym in here that's obtuse.

We spend a fair amount of time talking about the strategic environment, what I just highlighted. Then we describe how we're going to address this environment. And we do so in terms of a foundation of core attributes which align our behaviors as much as possible with our values of honor, courage and commitment. And then four lines of effort.

So you can imagine again the prioritization that's required to get down to four lines of effort. And then in each line of effort there's on the order of about five specifically named tasks in each line of effort. And in the line of effort that talks about strengthening our naval power at and from the sea, one of those tasks -- which there are only 20 listed -- is to increase and further ingrain our capability in information warfare, which I would say includes the electromagnetic spectrum.

So yeah, we're all in. And as we made adjustments and put the budget together we tried to invest more in that. I'm committed to more of that going forward. And so we're all in on that.

Of the part of our environment that's moving fast, it's hard to argue that there's any part moving faster than that, and so we need to really lean into that, try and shoot ahead of the duck, and that's kind of where our efforts are going right now. Fully committed.

Audience: James Drew from [Flight] Global.

Your Navy's at a similar inflection point with the Air Force where you're looking at the end of the F/A-18 procurement further out than what we previously thought. But at the same time you're trying to buy the F-35C, and then at the same time you're looking at your future fighter.

At what point do you stop buying the F/A-18s and start going all in on a future 6th Generation fighter for your carriers? And would you ever consider a joint program with the Air Force again?

Adm. Richardson: Yeah, I think as we look at sort of the next generation vehicle that will get us to air dominance beyond the Joint Strike Fighter you know, we're fully partnered with the Air Force there. Both of those efforts are kind of just getting started.

And it really, to answer your question about the Super Hornet, it's again sort of addressing a challenge with many dimensions. So in terms of maintaining an adequate Strike Fighter inventory of ready strike aircraft, fighter and attack aircraft, we've got some near term challenges in terms of a depot throughout of our legacy hornets. Because some of those are backed up, and a lot of that's the divot that we dug ourselves in sequestration. We're still kind of trying to pay that debt off that we made there. As we do that we're flying the Super Hornets more to get flight hours, which is bringing them to their end of life a little faster than was programmed. So you can kind of see how this all needs to pitch in.

The solution is a multidimensional solution. So it includes depot throughput and we're funding that at maximum executable capacity, and we're bringing in some private partners to help us to get through that backlog. We're looking ahead at when the Super Hornets come through, their life extension and depot

period. And so we're learning a lot of lessons now so that we don't learn the same lesson twice as those aircraft come through.

Then we are looking at adjustments to buying some new Super Hornets that will allow us to get through that period of time. Then we're, of course, looking at the F-35 as sort of the step into the next generation.

We've got unmanned aircraft in the budget this time which will start to lean forward into integrating unmanned into the air wing on the carrier, and then, as I said, we're just getting started in sort of the next generation air dominance platform. Both of those efforts are just starting up, but even in the early stages, committed to working with the Air Force on that so that we kind of learn from each other as effectively as we can.

Audience: Sir, Chris Cavas, Defense News.

Your Fleet Assessment Plan, the numbers of the fleet. Of course Congress requires an annual 30-year shipbuilding fleet plan to be submitted with the budget so you're already late on that. Is your new plan going to be reflected in this year's 30-year plan when that's finally submitted? Or will you submit a 30-year plan that will then have to be revised?

Adm. Richardson: I think we'd like to get the 30-year plan before we finish the analysis on this next plan, so it will probably precede that.

Audience: The --

Adm. Richardson: The 30-year plan will reflect the current Force Structure Assessment. The next one will reflect the analysis that we do in the updated assessment.

Audience: And that assessment will also include force structure analysis, the mix of the fleet, the balance, the number of carriers, surface warships, amphibs --

Adm. Richardson: Exactly. You make an excellent point that it's not just about the top number of ships. There's a structure to the fleet that is also just as important in terms of making sure that we meet the missions we're required to do.

Audience: Do you have a target date for either of those?

Adm. Richardson: For --

Audience: The 30-year plan --

Adm. Richardson: The 30-year plan is imminent and the Force Structure Assessment kind of this summer.

Audience: CNO, if you look at the third inter-related force that you talk about in here, you talk about the increasing rate of technological creation. A note, and I've heard many of your DCNO's talk about the budget line that you have in rapid prototyping put in, and I've heard some great stories from Naval Surface Warfare Center of how they've gone to Crane, Indiana and brought SEALs in and in five or six weeks they've identified a problem and had a solution.

With this rapid prototyping, there's a lot of industry out here thinking these are great initiatives and if we can turn inside the budget, this would be great. And I've heard some other people talk about it. Can you address some of --

Adm. Richardson: I would say that we sort of have two things going on in acquisition that will allow us to address this rate of technology introduction. I would say certainly with the industrial base we generally converge on technology pretty quickly, because that's what a lot of people are interested in. That's their life blood. But when I talk to our audiences it's not just technology. It's also concepts. So how we employ, even the fleet that we have right now is also ripe for this type of rapid prototyping and experimentation type of approach.

If you think about the inter-war period, in fact, how we developed War Plan Orange that was the campaign we used in the war in the Pacific was largely constructed by just a series of wargames up in Newport that just kind of went after that problem. They would do all of the things that you would expect in a healthy prototyping program. They would run so far and then they would fail. Right? And then they would go back. And hey, what did we learn about that failure? What were the lessons that we garnered from that? And then they would run it again and they would fail at a different point. Take it a little bit further. And you get this great harmony building up between the technology people that said hey, if we just sort of had this capability or this piece of kit, we could go further. Right? We need a plane of this range to do this island-hopping campaign. So what can we do about that? Et cetera.

So there's this kind of back and forth cross-talk that I think is, that's the real sweet spot, when you get concepts and technology informing and pushing each other forward.

So what we've done is to get at the technology dimension of that is we've proposed a rapid prototyping and experimentation department that would allow us to do exactly that, and it's based on having kind of a team of experts that are experts in a wide variety of disciplines so that we do our best not to miss a trick. We're going to aim at individual technologies that are relatively mature that might be engineered together to provide a unique solution. Then we'll get that together and we'll get it out, we'll do some in-house testing and then get it out to the fleet as quickly as we can. That's when the learning really starts.

There's nobody more creative than the United States sailor in terms of just sort of taking this thing that you've given them and making it work, making it better. Hey, if you only did this, how about this. If you added this. You get that conversation going with the engineers and you've really got it going on. So we've got that in terms of at the start of this process, you know, generating new ideas.

We've got to be open to the fact, and it's a rich dialogue that we're having within the department and also with Congress. We've got to be open to the fact that some of those ideas may not pan out. Right? We may reach a dead-end there as well. And I think that as long as we've learned something from that failure then calling it a failure is really not completely accurate. It's a lesson. And I'd much rather learn that lesson early and cheap than at the end of a long sort of classic program of record when I finally get into testing. Right?

So I want to learn those lessons early on in the value chain when that thing has least value. Right? It's accrued least amount of value.

And by the way, we'll have more confidence in the capability and reliability of that system as we eventually hand it off to the warfighter because of that hard work we've done to bring out problems early on.

So that RPED program, Rapid Prototyping Experimentation Division, will get ideas going. Unique solutions, trialing, and getting them faster.

Then we've got another initiative that we're looking at which is based on the Air Force's Rapid Capability Office, but it's this fast track for technologies that are appropriate to get them through all the acquisition wickets and into production faster. So it's just standing up the Maritime Accelerated Capabilities Office, MACO. I think that's a nice maritime acronym.

So not only do we have some initiatives going on to get ideas faster and prototyped and tested earlier, but also those technologies that pan out and show value, as well as others that might be appropriate. Get them over to the speed lane, the MACO lane, and see if we can't get them to the fleet faster. Then migrate more and more things over into the MACO lane until you know, kind of just the stragglers are in the slow lane.

Audience: Marcus Weisgerber with Defense One.

I wanted to kind of build on the 6th Generation aircraft question you were asked just a bit earlier. Seeing all the developmental problems that have come up with the F-35 along the years, do you use the department actually embarking on another multi-service program like the F-35 for the 6th Generation fighter program?

Adm. Richardson: As I said, it's just getting started so it's really too early to make a conclusive statement in that regard. But I'll tell you, let me answer your question in the context of where I want to take our unmanned carrier program. Right? There's just so much to learn about integrating unmanned aviation into the carrier air wing right now, but I just want to get started.

So this new vehicle, the MQ25 I think is what it's going to end up being designated, Stingray, will be just that. It will have a very valid mission for the current and future air wing. You know, ISR and tanking. Even more important, it will get us unmanned on deck. So now we can start to confront those operational challenges and we can learn our way forward from an operational standpoint as well. So it's very important that we do that.

Then in parallel, we're going to partner with the Air Force and partner with the technologists such that as technologies mature, to increase the capability of this aircraft at the appropriate time, you know, we want to make sure that we don't do anything now that would preclude additional capability later on at the appropriate time, and we will literally learn our way forward with a much tighter cycle, right?

I don't think it's so much t6he collaboration between the Air Force and the Navy that would change. We still want to do that so that we capture all of those lessons. One size does not fit all. There's a lot that goes into putting an aircraft on an aircraft carrier that does not get involved with a land-based airframe. But that doesn't mean that we don't have a lot to learn from each other, right? And then we just get that learning cycle as tight as we can so that it allows us to improve at rates that much more approximate kind of these exponential curves that we're seeing in technology introduction, rather than making a 35-year or 25-year bet on what the security environment's going to look like 25 years from now. We'll just iterate on a much shorter cycle going forward.

So I'm hoping, and I'll do everything in my power to make sure that this unmanned carrier-based aircraft is a model for how we can do this going forward.

Audience: Sandra Erwin with National Defense.

Can you talk a little bit about what's happening with the V-22 COD airplane? I guess in terms of the budget, do you believe that the Navy's going to be able to fund this program? And in time to replace the aging C2 airplanes in the fleet? Thank you.

Adm. Richardson: Absolutely. It's in the budget program there. I've asked a lot of questions of the team to make sure that we've sort of rung out all of the issues that are associated with taking the MV-22 and using it in that COD type of a mission. There's kind of no big concerns on the horizon. I think that they've focused on the right issues. It's in the budget. So we see that as our way going forward.

Audience: Mary [inaudible].

I wanted to ask you about foreign military sales. Foreign military sales, some of them have stalled. There's the issue with the fighters that are supposed to be sold to Kuwait. Do you see sort of a need to revamp that process? And what are the impacts for you if you don't, if there aren't those foreign military sales to sort of help keep programs going?

Adm. Richardson: I think there's certainly an economic part of this and so that part is clear, right? There's also, again I won't go over my prioritization discussion again, but one of the lines of effort in the design is this idea of expanding and

strengthening partnerships and one of the five areas, in fact I think there's only four, is international partnerships. Right? And I think that you've got to start with what are our strategic aims, where do we have common interests with our partners, and how can foreign military sales achieve and strengthen those strategic aims? So I want to bring that whole program into the discussion of strategic partnering so that we use foreign military sales not only to strengthen our industrial base, but also as a strategic element to enhance and strengthen our partnerships.

Audience: What about that particular sale? Is there any movement on that, moving that forward?

Adm. Richardson: We're monitoring that very closely. You'd have to ask somebody else about the details of that.

Audience: Can I just follow up on the South China Sea?

Adm. Richardson: That's not a follow up, that's a brand new question. [Laughter]. Nicely played.

Audience: You've got to try, right?

You spoke about that of course in the context of just the overall challenges that are there. How do you see these sort of operations continuing? You've talked about, you and others have spoken about doing increasing Freedom of Navigation exercises, but also increasingly complex exercises. Is there, you know, can you give us an update on that, how that's playing out? Whether you think that that in fact may be having unintended consequences?

Adm. Richardson: I think that it's having just the right consequences. We talked about zooming out and the fact that we are a maritime nation, the fact that 90 percent of our trade comes via the sea. Thirty percent of the world's trade goes through the South China Sea. Twenty-five percent of so goes through the Mediterranean. It passes through some of these choke points that define how goods and services and everything move over the oceans.

In these global systems in an increasingly globalized world, it's all about the rule set that governs those systems. And the rule set that's been in place, you know, for the last 70 years has been one that is orderly but open architecture, right? Everybody can come in and plug into that system, and that has

fueled the economic growth of so many nations in the last 70 years, particularly in that part of the world. Right?

So we think that advocating for that rule set is absolutely critical.

Someone who wants to come up with maybe a rule set that is orderly but not so open architecture, we think that's, I think that's a move in the wrong direction. So we need to advocate for order and the most level playing field.

That's why Freedom of Navigation operations, we just had the Stennis Strike Group in the South China Sea for a little while. These things just show advocacy for that rule set. They are the least provocative thing that you can conceive of and we do them around the world. It's not like we're focused on the South China Sea exclusively. I think we did something on the order of 19 of them around the world last year, and it's just what we do. Right? We advocate for that sets of norms and behaviors that allow everybody the best chance to prosper and succeed and that's the way we'll do it going forward.

Audience: I'm not expert on this but I read people claiming that the carriers will be driven further off area of operations by long range weapons, but that the new aircraft are shorter range than the old ones. What's the real story?

Adm. Richardson: What's up with that? I'm not an expert, but that seems like a problem to me. [Laughter].

I think that it's a great question, and I know that you're all disappointed that I didn't bring a massive slide deck with me today, but I like, there's a couple of slides that I do like to picture and it goes back to hey, if you talk about these forces that are acting in the strategic environment and you talk about the changing competitors in that environment, and you bring all that together. You bring the technology, the maritime, the information forces together, in the hands of a changing competitive environment, changing competitors, and there's a slide that I use to describe, let's just take a look at those sort of traditional choke points, the geographic choke points around the world.

And if you were going to put some kind of a not so long ago coastal defense cruise missile battery to monitor those choke points, and the radius of that system on the order of, I don't

know, 75-80 miles type of a thing, it still is a fairly localized effect that you have.

By virtue of employing these information technologies technology in the maritime context, you've now got a weapon system, and they're going to proliferate, right? So it's just one of these forces of the environment, where you can reach out hundreds of miles, 700-800 miles. And you put that radius over those choke points and you start to see how the term anti-access or area denial emerges, right? You get big chunks of the oceans that start to become under that umbrella.

I guess I would say a couple of things. One, it's important to remember that that is still a very difficult problem to do. Right? If you think about the chain of events that has to happen to target, to detect, to target, to transfer that data to a weapon system, to launch that weapon system, get it up there, it does its mid-course thing, does its terminal phase thing, and all of that. You know, if you deconstruct that entire chain of events you can kind of disrupt that at a lot of different places. So that's one approach.

The second thing that I think is very important to keep in mind with naval forces is that we are constantly maneuvering. We are a global maneuver force. Right? So that data is highly perishable. As soon as you sense that ship, whether it's an aircraft carrier or whatever, you know, that's going to be obsolete data very quickly. Right? We're constantly maneuvering. Then we've got technologies to make every part of that kill chain, if you will, very very difficult.

So it's easy to sort of draw these radii around and say hey, everything inside of there is verboten. It's just not the case. I'll take that carrier strike group and we'll distribute it to make that targeting problem much harder. We'll employ some of those electromagnetic warfare techniques that have been mentioned already. We'll make that an extremely difficult problem for anybody who wants to do that, and this is the way that we do that.

Then to the aircraft range thing, we've got to get at that piece too.

But this is what I'd say. The rules have changed. This is an area where the rules have changed.

Audience: Justin Johnson with the Heritage Foundation.

Back to the force structure discussion, your new plan. Can you comment to what degree will budgetary restraints play in your decision on what--?

Adm. Richardson: People ask is it a budget driven strategy or a strategy driven budget? It's kind of a classic question, but it's a false question, right? Strategy must include your means to do that. How much can you afford, if you will, in terms of resourcing.

So the budget is, I think, a subset of a strategic approach. So of course that number will be informed by what we can afford. It would be fiction otherwise.

But what I've got to also include in that is a very keen articulation as we come off sort of the ideal where we can address all problems, whatever force size, fleet size that results in. That's almost, just as likely going to be a fleet that is going to be very difficult to afford, right? So we're going to come down off of that.

As we come down off of that we accumulate risk. And so it's my job that as we do that I keep a keen accounting of that risk in very specific terms so that I can articulate that to our decision-makers so that they know what they're getting. They make a fully informed decision about the force that we acquire, the force that we build to, and we have a very clear-eyed understanding of the risk that we buy along with those decisions.

Moderator: Sir, you had talked a little bit about trying to break the kill chain, and I know that distributed lethality has obviously been an issue that you've been embracing recently. Can you talk about that in terms of the ability to be more offensive in terms of distributed lethality? And particularly, how will that change the calculus of our adversaries' thinking?

Adm. Richardson: This distributed lethality concept, and if I say NIFC-CA, does everybody understand, raise your hand if you're kind of savvy. It's Integrated Fire Control - Counter Air. So it's kind of distributed lethality, but the aviation version, if you will. And I see this all kind of coming together, Jim, in a system where essentially, just about any sensor in the inventory can talk to any platform in the inventory and pass targeting data, and then each of those platforms will have a fleet of weapons to address that threat if

it is a threat. You get that going, right? If you think about that space, the multi-dimensional space. So many sensors, so many platforms, so many weapons choices. And when I say weapons, I would say payloads most accurately, because it may not be a kinetic missile or something. This may be an electromagnetic or a directed energy or it might be a cyber or something that we can bring to bear.

You start to think of this web that emerges, or this space. That's I think the direction that we need to happen.

Then there's a resilience that comes with that. There's graceful degradation and restoration that can happen in there as we kind of get distributed lethality plus NIFC-CA, plus submariners are just scared to death of the whole concept. But we need to bring them in so that we've got the benefit of all their information and their weapon systems. So that's kind of the direction I'd like to go. And I think something like that gives anybody who wants to challenge us a heck of a lot to think about.

Moderator: And if I don't miss my mark, sir, that Virginia payload module's going to be how the submariners will participate in that --

Adm. Richardson: That will certainly give them a lot more payload options, but they're going places that, you know, undetected. They just have access that a lot of other platforms don't have. That access leads to information and we've got to plug that information into the system as well. So it's more than just the VPM.

Moderator: Very nicely done.

Adm. Richardson: Thanks.

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